

COMBO 450

trim

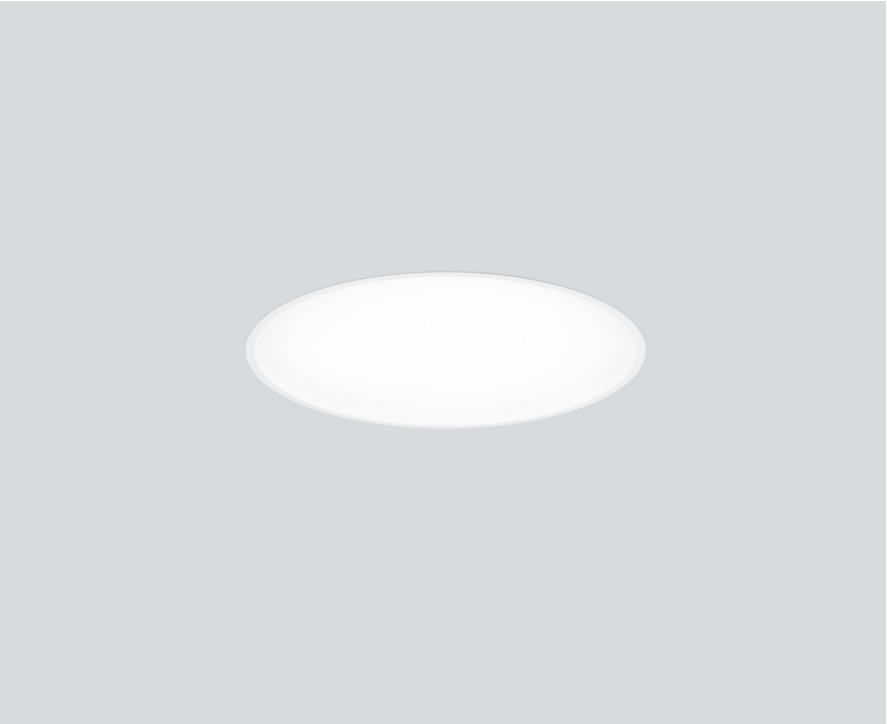
064-10415370



Project / Type

Notes

Count / Date



IP 40

X-PERT

X-PERT

220-240 V

General

Ceiling | Recessed

pure white | RAL 9010 ¹

IP40

2050 lm

LED

3000 K

CRI ≥ 80

L90 / 50000 h

initial MacAdam ≤ 3 SDCM

MR 0.54 | MDER 0.49

Optical

Opal | opal (lambertsch)

PstLM ≤ 1.0 ² | SVM ≤ 0.4 ²

Electrical

DALI-2 | 1 DALI Addr.

PC1 | 220-240 V

system 16.7 W

system 123 lm/W ³

Physical

trim

diameter 466 mm | height 72 mm

3.1 kg

Cutout

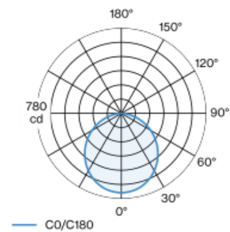
diameter 455 mm

min. ceiling thickness 10 mm | max. ceiling thickness 25 mm

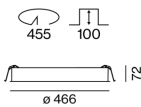
recessed depth 100 mm

Round light fitting in aluminium; recessed light with wrap around edge; suitable for ceiling thickness of 10-25 mm; surface pure white powder coated; installation without tools using snap spring closure; external converter for ceiling insertion, through-wiring suitable; electrical connection by means of reverse polarity protected plug system; LED board highly reflective lacquered for higher efficiency; light colour 3000 K; binning initial MacAdam ≤ 3 SDCM; CRI ≥ 80; min. 90% of luminous flux after 50000 operating hours; energy efficient LEDs with high CRI; flush ceiling light level; completely homogeneously illuminated, satin PMMA cover; same luminance for all size versions; degree of protection IP40; PC1; 220-240 V; internal wiring in light halogen free; incl. DALI-2 converter; light source replaceable by an authorized professional; control gear replaceable by an authorized professional;

Light distribution



Product drawing



¹ RAL code ² Value of containing product at full load (undimmed)
³ incl. consideration of optical losses, internal control unit losses & operating device efficiency

Installation instructions



Lighting calculator



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Maintenance Factors

Operating Time [h]	10 000	20 000	30 000	40 000	50 000
LLMF	0.98	0.96	0.94	0.91	0.9
LSF	1	1	1	1	1
MF	LMF × RSMF × LLMF × LSF		RSMF ^a	Room Surface Maintenance Factor	
MF	Maintenance Factor		LLMF	Lamp Lumens Maintenance Factor	
LMF ^a	Luminaire Maintenance Factor		LSF	Lamp Survival Factor	

^a According to "CIE 97, Maintenance of indoor electric lighting systems", 2005, ISBN 3-900-734-34-8. The values must be determined by the planner.

Circuit Breaker Types

Automatic Circuit Breaker Type	Number of Fixtures
B10	21
B13	28
B16	35
B20	44
C10	35
C13	46
C16	58
C20	73

Mounting accessories

MOUNTING RING

TYPE	ARTICLE NUMBER(S)
for acoustic ceiling COMBO 450	064-1906400

